The RARS Exciter

Issue 268 -July, 1992 - Club Repeaters: 146.64 -, 147.57, 224.64 -, 444.5+, 444.95+

SPECIAL EDITION !

Membership Package Enclosed.

After much hard work by KN4AQ and a supporting cast of thousands we have a new members information package. Enclosed in this issue on pages 5 - 14 and 19-28 you will find 20 pages of essential information for both old and new RARS members alike.

The package contains information on such things as Club Meetings, the RARS Hamfest, Club special events, License classes, Nets and much more.

Also included in the package is extensive information on area repeaters and etiquette. Enjoy!

Renewal Time Is Here !

Well its that time of year again. Your membership of RARS is about to run out and it is time to renew.

On pages 15-18 you will find a form to fill out. It is designed so you can pull it out and use it as a return envelope after folding and taping your check inside. Or, of course you can bring it to the next meeting and hand it to the treasurer in person.

Dues this year have increased to balance our budget as voted on at a recent club meeting. See the application form for full details.

The Raleigh Amateur Radio Society, Inc. (RARS), founded in 1969, has grown to be one of the premier radio clubs in North Carolina. Current membership exceeds 500.

The objectives of the club are to promote world wide friendship through Amateur Radio; to be of public service by providing radio communication in times of disaster, emergency, or civic need; to educate members in radio technique, and to assist in obtaining Amateur Radio licenses.

All persons interested in Amateur Radio, currently licensed or not, are eligible to apply for membership to the club.

Dues to the club are $18.00 per year (which runs from July 1 to June 30). Applications for membership may be obtained from any of the officers named below; from the newsletter editor, named on the facing column; or at any RARS Meeting.

Club meetings are held the first Wednesday of every month, 7:30 PM, at the Raleigh YMCA, 1601 Hillsborough St.

In addition to the many social and special events, the club sponsors a 2 m repeater, W4DW, on 146.04/64 MHz. The club also sponsors repeaters on 223.04 / 224.64 MHz, 444.5 / 449.5 MHz, 444.95 / 449.95 MHz and a packet cluster node on 147.57 MHz. All repeaters cover Raleigh, and most of the surrounding Wake County area. Auto-patch privileges are available on W4DW to duly licensed RARS members.

1992 Officers:

President:	Walter Price, KM4BU 420 Oak Ridge Cary, NC 27511 481-3856
Vice President:	Rick Merkle, KA3PSK 6412 Sassafras Lane Raleigh, NC 27614 870-8268
Secretary:	Liz White, KO4CK PO Box 13315 RTP, NC 27709 481-2874
Treasurer:	Bernard Blackmon, KC4UPX 913 Northwoods Drive, Cary, NC 27513 467-8719

The EXCITER is published monthly by the Raleigh Amateur Radio Society, and is mailed at no cost to its members.

Letters to the Editor, technical articles, items of interest to the ham community and guest editorials are actively solicited.

Any article published in the EXCITER does not necessarily represent the views of, the Officers, Board of Directors, Editor, or Society Membership, nor does publication thereof represent concurrence by the Officers, Board of Directors, Editor, or Society membership with the contents of the article.

Articles will be printed at the discretion of the Editor, and no article will be published unless it is accompanied by the name(s) of the person(s) submitting the article.

All copy must be in the hands of the editor by the end of the Board of Director's meeting on the third Wednesday of each month. Articles submitted for publication may be hand or type written, an ASCII file on disk transmitted electronically via telephone modem, or on the ham bands using PACKET.

Ham related items for sale by the members will be advertised without charge for one issue, but may be re-submitted as often as desired. These ads must be non-commercial in nature.

Commercial ads will be run in return for the following donations to the club:

	Single Issue	Full Year
Business Card	$7.50	$75.00
Quarter Page	$11.25	$112.50
Third Page	$15.00	$150.00
Half Page	$22.50	$225.00
Full Page	$50.00	N/A

(Commercial ads must be of "camera-ready quality," and obviously can not be sent via ham bands.) Due to the reprographic process used, no color copy can be accepted.

Mailing List:	Tim Buehlmann, N4IQA 1314 Chaney Rd. Raleigh, NC 27606 851-7338
1992 Editor:	Mike Gingell, KN4BS 113 Trotters Ridge Drive Raleigh, NC 27614 847-4779

SPECIAL SERVICE CLUB ARRL

Young Ladies' Radio League

AMSAT

SOUTHEASTERN REPEATER ASSOCIATION MEMBER

RARS CALENDAR of EVENTS for July, 1992

JULY	1	Regular RARS Meeting, 7:30pm, YMCA, Hillsborough St.
JULY	8	VHF/UHF SIG Meeting, info Woody, KJ4SO, 848-1844
JULY	11,12	IARU HF World Championship, see April QST
JULY	15	RARS Advisory Board Mtg, 7pm, YMCA, Hillsborough St. ALL MEMBERS WELCOME!!
JULY	18	Cary Swapfest, new location-Cary Comm. Ctr, 404 North Academy St.; w/exams, contact Vince, 847-8512
JULY	20	RARS SWL/Scanner SIG, contact Curt,KD4YU, 772-0207
JULY	22	RARS Homebrew SIG, Contact Bob, NA4G, 847-0069
JULY	23	RARS CRYSTALS Dinner Meeting, contact Liz, 481-2874
JULY	25,26	Hamfest, Asheville, NC, info, Keith, (704) 254-9718
AUG	1,2	Hamfest, High Point, NC, info, 887-3039.
AUG	5	Regular RARS Meeting w/exams
AUG	12	VHF/UHF SIG Meeting, info Woody, KJ4SO, 848-1844
SEPT	5,6	Hamfest, Shelby, NC

From The Editors Desk

Well, here is an exciting Exciter - 32 pages! Just don't expect this every month, thats all. This months issue has a major contribution from KN4AQ and the Welcolm Package Gang. Also a center pull out Membership Renewal Form.

This month also marks a change in the way the Exciter is mailed. In the past we have mailed it first class mail which restricts us to one ounce and a size less than the standard Exciter page. This means we either have to pay a 10 cent oversize penalty (like last month) or we must fold and staple it again - which is even more expensive.

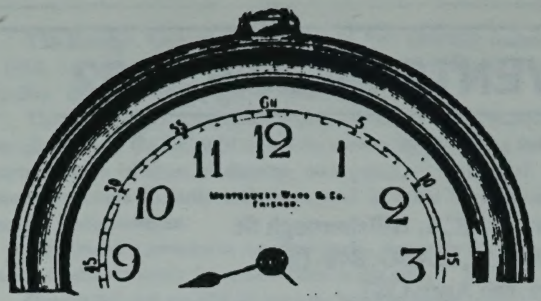
At a recent RARS Board meeting it was agreed that we should switch to bulk mail to save on costs. This will allow us to mail up to 3.3 oz for about 23 cents a time.

One thing that concerns me is that you will not get your Exciter in as timely a fashion as before. Bulk mail is slower so outlying members may not get their copy before the next meeting. Since taking over the Editorship of the Exciter I have tried to get it to the printers at least a week before the club meeting. With first class mail we usually made it but now - who knows. Let me know how your copy arrives late, on time, mutilated or not at all.

If you have a problem with the mailing address on your label, please let Tim Buehlman N4IQA know. Since relinquishing the job of Treasurer he has kept the job of keeping up with the membership list. Each month he provides me with a set of labels - hopefully they accurately reflect the members addresses and calls.

Which reminds me, a recent check showed some of you are in breach of FCC rules. If you have moved **you MUST fill out a 610** - or else cease operating.

73 - Mike, KN4BS



MINUTES OF THE MEETING

The regular meeting of the Raleigh Amateur Radio Society was held June 3, 1992 at the YMCA on Hillsborough Street. The meeting was called to order by Walter KM4BU at 7:30. He welcomed the 93 members and 20 guests to the meeting. He noted that Clyde KD4BFF was recovering well and was in attendance at the meeting.

Ronnie WA4MJF announced the East Wake Middle School needs equipment for their radio club and any donations would be appreciated. You may contact him if you can help. He noted the owners of amateur radio tags will now pay every year. Also a note on MARS — all services will admit codeless techs for 1 year effective 1 June 92.

Liz KO4CK encouraged all newly licensed female hams and YLs or XYLs of hams to come out and join the Crystals. You need not be licensed to join. It is a very informal group who's purpose is to get to know others in the club. You can call any of the ladies for further information. Curt KD4YU announced the SIG special purchase price for a typical all-band scanner antenna at $30.44 each. Contact him for more information.

Requests were made for participants for the upcoming field day. A good opportunity for newly licensed hams to "get their feet wet."

Rick KA3PSK announced the possible move of the Friday Night Traders Net to Thursday and was soliciting opinions on such move. Also the Computer net has been cancelled. Gary KN4AQ showed 2 videos - one on prior field days to give examples of what goes on at these events and another on the Channel 5 coverage of Clyde KD4BFF's help from area hams when he suffered his stroke. It was an excellent example of hams helping others in time of need.

Tom KM4LB the Wake County Emergency Coordinator for ARES said IBM had donated a computer and a TNC is needed to help with packet aid in times of emergency. Also Wake Tech will have a 3-hour course around August on incident command system. It would be worth your time to try to attend. The Cary Swapfest will have an ICOM T28 as 1st prize. Elections for the positions of RARSFest Chair and Field Day Chair were held. Nominating Committee nominated Ronnie WA4MJF for the RARSFest Chair for 1993. Motion by Max KO4TV with second by Woody KJ4SO to close nominations. Motion carried. Motion by Rick KA3PSK with second by Walter AB4DQ that the secretary cast a unanimous ballot for Ronnie WA4MJF for the office of RARSFest Chair for 1993. No opposition. Motion carried. Nominating Committee nominated Mike and Mary Alice Ramsey as co-chairs for Field Day '93. Motion by KD4OKO and second by KA2FWC to close nominations. Motion carried. Motion by KA3PSK with second by KD4OKO that the secretary cast a unanimous ballot for Mike and Mary Alice Ramsey for co-chair for Field Day '93. No opposition. Motion carried.

Bernard KC4UPX gave the treasurer's report. He then presented the proposed budget to the membership. Motion by KJ4SO with second by KD4BFF to pass the budget as recommended by the Board. Motion passed.

Tim N4IQA spoke about his recent trip to Russia. He has set a schedule with 2 hams in Moscow — Vlad RW3AG and Nick UV3GZ. It is 11 o'clock on Sunday evenings on 142.00 - 142.20. RARS members are encouraged to make contacts. He has signed the two up as RARS members. Call Tim for further information.

There has been a work party led by Max KO4TV to build tables to replace those "lost" at the hamfest. This will save the club quite a bit of money. Max also enlightened all with his Ballad of Field Day 92. Thus far, it has not been set to music!

Rod Gonski of the National Weather Service presented a very interesting program on severe storms and tornadoes.

(Continued on Page 29)

WELCOME TO RARS

RALEIGH AMATEUR RADIO SOCIETY

June 1992

Welcome to the Raleigh Amateur Radio Society (RARS)! Founded in 1969, RARS has grown to become one of the premier Amateur Radio Clubs in North Carolina.

With more than 500 members, RARS reflects a wide variety of interests. HF operation, DX, home-brew, vintage equipment, CW, all modes of VHF/UHF, packet and computers, ARES and Public Service, new-Ham training, contests, special events, repeaters, DX/ARES PacketCluster, Field Day operation, club meetings, shortwave listening/scanning, the Exciter newsletter and more are all part of RARS activity. So RARS is a big club, but it's also many smaller clubs. Most of these individual aspects of Amateur Radio are organized through a RARS Special Interest Group (SIG). There's even a "special interest group" for our women members, the Crystals. SIG membership is usually a more manageable dozen or two, so you needn't feel lost in RARS, big as it is.

This publication will give you a brief look at many of the RARS functions. Each SIG invites you to participate. In addition, since so many new Hams are joining the hobby at the Technician Class level, an extensive introduction to FM and repeaters is included, along with the RARS Repeater Operating Guide. To find out more about RARS, come to a meeting, visit a SIG, ask on a repeater, or talk to any member! We're glad you're here!

Repeater Operations Guide Inside

EVENTS AND ACTIVITIES

CLUB MEETINGS

RARS general membership meeting is the first Wednesday of each month, at the YMCA, 1601 Hillsboro St. in Raleigh. People start showing up after 6:30, and the meeting is supposed to start at 7:30 (and sometimes it does!). Doughnuts, coffee and soft drinks are provided. After the business meeting, we have a program of general interest to Amateurs, and we close by drawing names for door prizes.

The March meeting is actually our birthday party. RARS members' efforts are recognized with certificates and plaques. It's one of the major RARS social events of the year.

The November meeting is our annual Auction, a golden opportunity to get rid of your junk and/ or acquire a "treasure." The club gets a modest percentage of your sale.

HAMFEST

On a Sunday in April, RARS sponsors the RARSFEST. Big enough to fill up the Jim Graham building at the State Fairgrounds, RARSFEST is among the larger hamfests in the Southeast. Dozens of club members volunteer to help with set-up, talk-in, tickets, vendor assistance, security, hospitality, exams, the Saturday Night Social, and more. Volunteers work a one or two-hour shift, leaving plenty of time to check out the flea market and enjoy the event.

If you want to dig in deeper, the hamfest committee meets several months prior to April, planning and preparing for the event.

PICNIC

Usually held in September or October, the RARS picnic is a family event featuring food, fun and games for everyone. It's a good time to meet the family behind the ham.

LICENSE CLASSES

Each spring and fall, RARS holds license classes for new Amateurs. The classes are aimed at the Technician license, both code and no-code, and run two evenings a week for six weeks. Several members volunteer to teach one or two nights each in areas of their own special interest.

VOLUNTEER EXAMINERS

RARS Volunteer Examiners are accredited through the W5YI VEC. They give examinations at club meetings on the even numbered months, at several area hamfests, and at the end of each RARS licensing class. Exams at club meetings are usually "walk-in," but exams at hamfests usually require pre-registration.

SPECIAL EVENTS

Every year there are public events that give us an opportunity to set up an operating station and demonstrate Amateur Radio. In 1992, RARS participated in the **Raleigh 200** celebration of the city's bicentennial, beginning with a chilly operation at the State Capitol on New Year's Eve, and we set up a SAREX demonstration at an area High School, attempting to contact the Space Shuttle.

VHF/UHF CONTEST AND PICNIC

In June, the VHF/UHF SIG turns the ARRL VHF/UHF QSO Party into a picnic, setting up a Field Day type portable operation and cookout.

FIELD DAY

The last full weekend in June is the ARRL sponsored Field Day, and RARS goes at it big. We have two separate operations, each with several stations. One group is seriously contest oriented -- they're out to win! They usually operate QRP (low power - 5 watts or less), and mostly CW, using battery or solar power. And they score big, often finishing in the top 25 for *all* Field Day stations nationwide.

The other group makes Field Day more of a social event, but make no mistake: the operating is still fast and furious. First-time operators and new licensees will find guidance and encouragement to jump in and learn the ropes. Recently, the Crystals have set up an all-YL station, and a special station is set up for the Novice/Technician opertiors.

CHRISTMAS PARTY

The Christmas Party in December is another big family event, with lots of food, fun and of course, Santa Claus. This is a pot-luck event, so whip up something special and bring it along!

NETS

There are a variety of nets operating on the 146.64 Repeater. Randy, KC4GFR, offers this invitation to the RARS nets:

"Calling the RARS Friday evening 2 meter net." That's what I say. My name is Randy. My call is KC4GFR. Let's talk about the 2 meter net on .64. 'What net?' The net I speak of is the Raleigh Amateur Radio Society's 2 meter evening net. It is called every night at 8:00 PM or 2000, which ever you prefer. As I said earlier, I call the Friday net and I have a ball doing it. It is, of course, the stations that check in that make a good net.

The RARS evening net is a part of the National Traffic System and we do take messages which then are placed into the system bound for wherever the sender wishes. Also, we have club announcements, bulletins, and if you stick around, a rag chew.

The evening net is a good place to meet club members and to make yourself known. So, come and join us every night you can at 8:00. I'll be looking for you on Friday night.

73, KC4GFR

A different Net Control runs the 8:00 Evening Net every night of the week. In addition, the repeater features these weekly nets:

Thursday at 8:30 PM it's the Trader Net, possibly the most popular net in North Carolina! Dozens of stations check in to buy, sell and trade Amateur and Computer related hardware. Non-commercial check-ins only, please!

Saturday after the Evening Net, the Homebrew SIG sponsors the Technical net. Got a question about some technical aspect of Ham Radio? Get an answer! Or just check in and brag about your latest accomplishment. This net competes with the Trader Net as "Most Popular in North Carolina!"

Other nets come and go -- don't be surprised to hear special-interest nets on and off throughout the year. Nets have operated in the past on 10 meters, for young operators, for women, and for computer enthusiasts. Want to start a net? Contact the Public Service director.

OUTGOING QSL SERVICE

Terry, AB4VJ, operates the RARS QSL Service, and provides this information:

The Outgoing RARS QSL Service is a real cost and time saver for the HF DXer. The service works with the ARRL Outgoing QSL service to conveniently send your DX QSL cards overseas to foreign QSL bureaus. To use this service you must be a member of RARS and the ARRL. There is no charge.

How to use the Outgoing QSL Service:

1. Presort your DX QSLs alphabetically by call sign prefix (AP, C8 ,F, G, JA, ZN, 5N, 9D, etc). Addresses are not necessary.
2. Attach current month's mailing label from QST
3. Secure cards with a rubber band
4. Drop into QSL box located at the sign-in table at the RARS regular monthly meeting

PLEASE write neatly !

This service *cannot* forward cards to US amateurs in the lower 48 states or to those countries which have no operating bureau. You can also reply to foreign SWL stations, or if you go on a DXpedition, we can handle your outgoing US cards with your foreign call shown on the QSL card.

Looking forward to see who you work.

PUBLIC SERVICE

Bill, KC4UQO is the RARS Public Service Director, and here's his pitch:

The most important aspect of Amateur Radio is Public Service. Whether it involves providing radio operators for a local walking event or for a command post during an emergency, Amateur Radio provides a valuable communications link. RARS, in the past, has covered local events such as the March Of Dimes "WalkAmerica", Multiple Sclerosis "Super Cities Walk", and the Red Cross at the State Fair. These organized events would not exist without the volunteers that help by donating their time and effort.

In times of disaster, RARS members, along with other Amateurs statewide, man the communications centers under the ARES banner. In order to provide a more professional atmosphere, RARS Public Service has accepted the job of ARES training for Wake County Amateurs. A series of training classes will be offered to all Amateurs to enable us to do our part more efficiently when it is needed most. Wake is unique in that our county has the State Capitol. Thus, we not only must provide local communications but also help with state coverage as well.

However, none of this is at all possible without RARS members willing to give up a small amount of time each year with these events. Public Service activities are not for everyone. But as a new member to RARS, all we are asking is that you volunteer for just one event to try it. If everyone would do this, we would have no problem in providing enough operators for all the events. If you do not enjoy it, fine. But chances are you will

find it one of the most rewarding aspects of our hobby.

SKYWARN

Skywarn is a public service activity sponsored by the National Weather Service. Amateurs across the country act as weather spotters, reporting to organized nets whenever severe weather threatens a region. In this area, Skywarn operates as part of ARES (Amateur Radio Emergency Service), and uses the 146.88 Repeater. If a watch or warning is issued, listen to .88 and follow the net control station's instructions.

THE CRYSTALS

RARS is truly a family club, and while Amateur Radio is still predominantly male, more and more women are becoming part of the hobby. Licensed or not, RARS has a place for women members, and Liz, KO4CK tells us about the Crystals:

The RARS Crystals consists of women in the club, both licensed and unlicensed, who are interested in the Raleigh Amateur Radio Society. A dinner meeting is held every other month beginning in January. The meetings are held the 4th Thursday of the month at Shoney's on Avent Ferry Road in Raleigh. The purpose is to give members and friends a chance to get acquainted with one another and to promote the image of the women in the club. Anyone is welcome to join the meeting and all YLs and XYLs are encouraged to attend. The meetings are very informal. Payment of low annual dues entitles members to their own Crystal-Lines newsletter, published bi-monthly.

DX/ARES PACKET CLUSTER

The PacketCluster is a multifaceted packet machine operating on 147.57 MHz. While it's primary function is to alert DXers to rare countries or band openings, the Cluster also contains several on-line databases, such as the Buckmaster "Callbook," a listing of all the Triangle hams (including phone numbers), various DX aids and more. In addition, the Cluster has an ARES mode for use in emergencies. All this is tied into a network covering the entire Southeast.

The PacketCluster SIG has an extensive operating guide for sale, with the proceeds going to support the hardware of the system.

VINTAGE AMATEUR RADIO SIG

The RARS Vintage Amateur Radio SIG (RARSVARS) is dedicated to the preservation of amateur radio history, including not only the information and the traditions, but also the equipment of past eras. The SIG is genuinely concerned with the restoration and operating of historically significant amateur radio equipment. This includes making and operating modern replicas of vintage equipment. Meetings are held monthly, in association with the RARS Homebrew SIG. Notes and reprints of historically important information are available, and members of the SIG often display their vintage gear. All RARS members are invited to join in and learn about the way amateur radio was!

HOMEBREW SIG

The RARS Homebrew SIG is dedicated to the preservation of the art and craft of making "homebrewed" amateur radio equipment. This is, more and more, becoming a "lost art". In order to assist and train hams in this fun and enjoyable craft of "homebrewing" or "rolling their own" equipment, the SIG holds monthly meetings for discussion of all types of projects, ranging from antennas to receivers to transmitters to test equipment, etc. Such projects are of use to both HF and VHF hams, as well as to old hams with great experience and new hams who have just gotten their first ticket. The SIG publishes notes and special bulletins concerned with individual projects and broad areas of general utility on specific topics. All RARS members are invited to drop in and participate in the SIG.

If YOU have an interest in making your own equipment, join in on the fun!

ARRL

RARS is an Affiliate and Special Service Club of the American Radio Relay League. ARRL is the main national organization for all radio amateurs

and provides information on all aspects of Amateur Radio in its monthly journal *QST*. ARRL is the main voice for Amateurs to the Federal Government and the FCC and seeks to preserve our position and frequencies at international conferences. Our annual hamfest is normally an ARRL approved Hamfest or ARRL North Carolina State Convention. You and RARS will benefit by joining ARRL. RARS has an ARRL liaison position on the RARS Board of Directors. Contact him for league membership applications. Most of RARS members must be ARRL members for RARS to be an ARRL Affiliated club. The League is a source of most reference books used by amateurs today including amateur license training material. Some of the publications are available locally, at amateur radio equipment dealers or at "Hamfests" occurring periodically throughout NC and nearby states. They are also available by direct mail from ARRL Headquarters in Newington, CT. ARRL also provides, by radio, news and other happenings of interest to the amateur community as well as Morse code practice. As a league member you have the opportunity to vote for your league field staff. RARS recommends you consider joining the league, with or without holding an Amateur Radio license.

SWL/SCANNER SIG

Early in 1992 KD4YU came to the RARS Board of Directors and asked "How do you start a SIG?" The board said "Just start one!" So he did. This popular new SIG is for hams and non-hams interested in Shortwave Listening and Scanning. Monthly meetings feature discussions and demonstrations, and the SIG has made field trips to interesting facilities such as the NC Highway Patrol's Communications Headquarters.

VHF/UHF SIG

The VHF/UHF SIG is a forum for those interested an all areas of activity above 50 MHz. Yes, Virginia (and South Carolina), there is more to two-meters than repeaters! There's SSB, CW, satellites, high-power/ long-distance/ weak-signal work, moonbounce, meteor-scatter, aurora, plus contests and the annual picnic, and of course, "more."

COMPUTER BULLETIN BOARD

The club maintains a telephone (676-8469) bulletin board. The purpose of the RARS BBS is to provide a computer based message center for the Raleigh Amateur Radio Society. Non RARS members may find this BBS useful in getting information on area amateur radio classes and RARS membership information. This BBS is primarily a message center. While it has the ability to upload and download files, the file transfer system should be used ONLY for the transfer of articles to the Exciter, upload/download of text files of information on area amateur related events and similar files. This is to insure that the primary purpose of providing a readily available message system is met.

The BBS works up to 2400 baud, N-8-1.

REPEATER OPERATING GUIDE

In March, 1991 the FCC instituted the Code-Free Technician license. The sky did not fall and CB did not take over Amateur Radio -- but there are LOTS of new hams coming on the air. The RARS VHF/UHF Special Interest Group welcomes all of you to the RARS repeaters! We're glad you're here, and we would like to invite you to join our SIG.

The FM Chairman and the Technical Support Group, all whom are members of the VHF/UHF SIG, are responsible for construction, maintenance and operation of the RARS Repeaters, and we've prepared this guide to help you figure out how it all works.

WHAT IS A REPEATER?

Let's get basic for a few paragraphs... and if you're an old-timer, you might want to read through this section just to see if we got it right. First, what exactly is a "repeater?" And why do we use them?

The communication range between Amateur VHF-FM mobile and handheld radios at ground level is limited -- five to fifteen miles for mobiles, and just a couple of miles for handhelds. This is usually referred to as "line-of-sight" -- you can talk about as far as you can see (if you cut down the trees).

To extend our range, we use repeaters. A repeater is a specially designed receiver/transmitter combination. When you operate through a repeater, its receiver picks up your signal on the *input* frequency, and the transmitter re-transmits -- or "repeats" -- you on the *output* frequency. For example, one of the RARS repeaters hears you as you transmit on 146.04 MHz, and repeats you onto 146.64 MHz. You'll hear this repeater referred to as "six-four."

Repeater antennas are located on tall towers, buildings, or mountains (if available), giving them much greater range than radios with antennas near the ground. When you're in range of a repeater, you can talk to everyone else in range of that repeater. RARS' 146.64 repeater is located in North Raleigh, near Six Forks and Strickland

roads, and its antenna is on top of a tower that puts it about 500 feet above average terrain. A mobile station running about 25 watts can communicate through the repeater out about 45 miles. So if you were 45 miles East of the repeater, you could talk to someone 45 miles West of the repeater. That's 90 miles between you -- a whole lot better than the 10 or so miles you could cover without the repeater!

Repeaters can have many features beyond just extending the range of mobile or handheld radios. One especially useful feature is called Autopatch. A telephone line and special control equipment at the repeater allow you to make local phone calls from your radio. Now, this is not exactly a replacement for a cellular phone. You can't do business on Amateur Radio, including on an autopatch. You can't receive calls, you can make only local calls, and your conversation is *not* private! Everybody else listening to the repeater hears your call. Still, autopatch is handy, within its limitations. Some of the RARS repeaters have autopatch facilities -- keep reading and we'll tell you how to use them.

HOW DO YOU USE REPEATERS?

There are literally thousands of repeaters across the US (and the world). Each one can have it's own peculiarities and unique operating procedures, but there are some basics that apply to almost all of them. Really complete instructions would fill a book, bore you to tears, and start some fights about what's correct and what's not (operating procedure is a matter of strong opinion in Ham Radio!). We'll risk all of that now, but try not to fill a book.

PLAIN OLD TALKING. Mostly, you're here to get on the air and chat, right? OK, first you set your radio for the repeater you want to use. We can't tell you how to do that because we don't know how your particular radio works. So we'll assume you've gotten "on frequency" -- your receiver is listening to the repeater output, and your transmitter is set for the repeater input. The first thing you should do is... LISTEN for a minute. Repeaters are party lines. Lots of people use them on and off throughout the day, and the one you've selected may be busy with another conversation right now. So listen for a minute.

If the repeater isn't busy, key your transmitter and say something like "KN4AQ listening. Anybody want to chat?" (Use your own call, not mine please). When you un-key your transmitter, most repeaters will stay on the air for a few seconds, and many will send some kind of "beep." Then the repeater transmitter drops off the air. The beep is there to remind everyone to leave a pause between transmissions in case someone wants to break in. Even if there's no beep, leave a pause. Somebody may have just come across a traffic accident and needs the repeater to report it. If no-

body leaves a pause between transmissions, they can't break in.

If somebody answers, then have a good time! You can talk about anything you want -- there are few rules about the content of Amateur conversation. You can't use Ham Radio to *do* business, but you can talk about where you work and what you do. Prime time TV language has been peppered with some "hells" and "damns," and so has language on some repeaters. RARS discourages that. You're not having a private conversation -- you have lots of listeners, some of them children. Keep that in mind as you choose language and subject matter.

How long do you talk? I see you're catching on to the party-line concept. Maybe somebody else wants to use the repeater when you're done. There's no hard rule. It depends on the time of day (rush hours are PRIME TIME for mobiles, evening is also a busy time, while 2 a.m. is pretty empty), and who else might want to use the repeater. If you've been interrupted several times by others needing the repeater to call someone, maybe you've been on a bit too long.

THREE-WAY RADIO. Not all conversations are strictly two-way. Three, four or five or more Hams can be part of a "roundtable" conversation (five or more will be pretty unwieldy). A free-wheeling roundtable is a lot of fun, and it poses a problem: when the person transmitting now is done, who transmits next? Too often, the answer is *everybody* transmits next, and the result is a mess. You'll hear this often. The solution is simple -- when you finish your transmission in the roundtable, specify who is to transmit next. "... Over to you, Rick. KN4AQ."

WE PAUSE FOR STATION IDENTIFICATION. The RULES say you must ID once every 10 minutes. RARS is *big* on clear identification when you use our repeaters, but you don't have to overdo it. Give your callsign when you first get on (this isn't specifically required by the rules, but RARS encourages it on our repeaters), then once every 10 minutes, and when you sign off. You don't have to give anyone else's callsign at any time, although sometimes its a nice acknowledgement of the person you're talking to, like a handshake.

BREAKING IN. Repeaters are shared resources -- the party-line. There are many times and reasons that a conversation in progress might be interrupted. You might break in to join the group and add your comments on the subject at hand. Someone else might break in on you to reach someone else who is listening to the repeater. You might have to report an emergency. How to break in is the subject of debate and disagreement. Here are some suggestions:

Pick a good time. If you have an emergency, a good time is *NOW*. That's why there's a pause between transmissions. Otherwise, listen a bit. Read the ebb and flow of the conversation. One of the fastest ways to establish a reputation as a jerk is to frequently butt your way onto the air without regard for the people already talking.

Give your call, and say what you want. When you've listened and decided it's OK to break in now, transmit *before* the beep and say something like this: "KN4AQ, I have an emergency," "KN4AQ, can a make a call?" or "KN4AQ joining in."

What about "Break?" The problem with just plain "break" is that nobody knows exactly what it means, and everybody has to stop and find out. You will hear some Hams say "break" means "I just want to join in or make a call," "break-break" means "I have very important traffic," and "break-break-break" means "I have a dire emergency." That's fine, but not *everybody* knows that. Plain English works better.

Maybe somebody's breaking in on *you*. What do you do? Easy -- let them transmit, right now, unless you know absolutely and for sure that they do not have an emergency. Maybe somebody hasn't read this guide and isn't the expert operator you are now, and they just say "break" or drop in their call, when what they really mean is *"HELP."*

So let them talk. Say "go ahead." And if they're one of those boneheads who's interrupting your perfectly good conversation for no reason but to hear themselves talk, well, bite your lip and be glad you know better.

The exception is when someone actually announces an emergency. Then CLEAR THE DECKS! **DO NOT TRANSMIT.** The station who declared the emergency has the frequency, and unless they ask for your help, don't give it. Unless... always an unless... they obviously don't know how to handle the situation... and you DO. (You do, don't you?)

#$%$#%**!! What was that I just heard? A stream of foul language and nasty thoughts on the repeater? A rude noise? Sounds like something straight out of CB! I'm *OUTRAGED*, and I'm gonna tell that sucker off! He can't get away with that on *our* repeater! Gimmie that microphone!

Cool down. It doesn't happen often, but it does happen -- it's a big world out there, and there are some bad people in it (I hope this isn't news to you). Some of them find a Ham Radio now and then, and discover the delight of offending an audience. The key word is *audience*. Deliberate interference and bad language is designed to make you react. The person doing it wants to hear you get mad. They love it. And if they don't *get* it, they go away, usually quickly. So when you hear the rare nasty stuff on the repeater, our advice is to please ignore it completely. Don't mention it at all on the air. Sometimes a repeater control operator will decide that the best way to handle the situation is to turn off the repeater for a while, but the rest of us should bite our tongues and be silent.

MAKING AN AUTOPATCH CALL. An Autopatch allows you to make local phone calls from your Amateur Radio, through special control equipment and a telephone line connected to a repeater.

The autopatch will require an "access code," much like a computer password, but sent in Touch-Tones. Some repeaters have "open autopatch," allowing anyone to use it. Their access code is usually just a "*". Other repeaters (including RARS) have "closed autopatch." The patch codes are disclosed to members only, although members are encouraged to place calls for hams traveling through town.

The procedure for using an autopatch depends on the policy of the repeater's sponsor, and on the design of the control system. This is a basic guide:

First, make sure the repeater isn't busy. If you've just turned on your radio and don't want to wait a minute to see if the channel is active, you might ask "is this frequency in use? KN4AQ." If you have a clear channel, then here's what you do: on some older patches, you identify ("KN4AQ Autopatch"), dial the access code, unkey your transmitter and listen for a dial tone. Then dial the number. The patch on 147.15 works that way. On newer patches (like the RARS .64 patch) you dial the access code and telephone number as one string, and it stores and then regenerates the number. You then hear it dial and ring. The patch control holds the repeater transmitter on, with the phone audio connected. When you transmit, your audio goes on the phone line. The party you called says hello, and you transmit and talk.

Most people on the telephone end get a little confused by autopatches until they've had some experience with them. When you're transmitting, they can't interrupt you, but they don't know that. So even though they're being rude by interrupting, they will think YOU are being rude by continuing to talk and "ignoring" them. You can reduce this problem by keeping your comments very short, and releasing your transmit button IMMEDIATELY after your last word.

Another common source of autopatch confusion is the "Dead Phone Effect." When you transmit, some noise accompanies your voice on the phone line, even if you have a very good signal into the repeater. And when you stop transmitting, there's usually a little click or pop on the line. Then it goes dead silent, and the party on the line thinks the phone's gone dead. They will say "hello? hello? Are you still there?" or something like that. We enjoy it.

When you're done with the call, say good-bye, just like on a regular phone call, and let the party on the phone hang up. Then you hit the "kill code," which on many autopatches is the "#" button. And identify again (KN4AQ, clear autopatch). Listen to make sure you successfully killed the patch (the repeater may talk to you, or beep, or just drop.

For some reason, while the temptation to conduct business on most Amateur Radio modes is small, on autopatch it has been a big problem. This is probably because autopatch is the only mode that puts hams in contact with non-hams via Amateur Radio on a regular basis. It seems so easy to call work and pick up a message, or call a store and see if an ordered item has arrived. But remember, the FCC prohibits *all* business communications on Amateur Radio (except in emergencies). Not just *your* business, but the business of the party you call. And that goes for non-profit businesses and government agencies as well! The FCC has been very clear about this. If you try to make a call on an autopatch that even hints of being business-related, you can expect a repeater control operator to terminate your patch.

Specific RARS autopatch instructions are included later in this GUIDE.

DX! Well, you probably won't be hearing Albania on two-meters anytime soon, but VHF does have it's own form of DX. A few paragraphs ago we mentioned that the RARS .64 repeater had about a 45 mile range. Usually. Sometimes, though, VHF/UHF "opens up," and stations can be heard for hundreds of miles. This is another book-length subject. We'll just squeeze in that VHF/UHF band openings are a double-edged sword. It's exciting to talk to someone 200 miles away, and it's OK, too. But keep in mind that repeaters were designed to cover local territory, not half the country. So when the band opens up, there is the potential for lots of interference as well as lots of fun. Repeaters on the same frequency will suddenly be too close together. You could very easily be keying up two or more of them at once. To be responsible, get to know where your signal is going (a repeater directory will help). Use a directional antenna, minimum power and keep your conversation short.

On .64, we have to be particularly sensitive to the .64 repeater in Winston-Salem, about 90 miles away. When the band opens, even just a little, their mobiles begin keying up our repeater, and we begin keying up their repeater. While normally not fatal, this can be irritating. Running minimum power, either mobile or from home, will help.

How much power is too much? Within 15 miles of the .64 repeater (that's everyplace in Raleigh), two to five watts into a mobile antenna is all you need. 45 watts is excessive. At home, with an antenna up on the roof, 45 watts is *really* excessive for talking through a local repeater. When the band is open, even a five-watt mobile signal can travel from Raleigh to Winston-Salem. At those times, patience and courtesy will help a lot.

SIMPLEX. This may come as a shock, but you don't *have* to use a repeater to communicate on two-meter FM. You can use simplex, which means *your* radio talking to *my* radio directly. We do have that five to fifteen mile range -- much more if we're on our home stations. Why not use it? But *don't* just pick any old frequency your radio can generate to talk simplex! You may end up on the input of a repeater and interfere with people you can't hear. Use the **Band Plan** simplex channels:

146.40 146.43 146.46 146.49 146.52 (the National Simplex Channel) 146.55 146.58 147.48 (RARS Official Simplex Channel) 147.51.

BAND PLAN? Yes, there is a plan organizing frequency use for two-meters (and, for that matter, every Amateur band). For the most part, band plans are voluntary -- the FCC regulates only a few modes and band segments. Band Plans are always "works in progress," changing as needs and technology change, so they've been developed

over the years. Here's a skeleton outline of the two-meter band plan:

144.0 - 144.1 CW, beacons

144.1 - 144.3 SSB (144.2 is the National SSB calling/listening frequency). Long-distance, high power, weak-signal, moonbounce, meteor-scatter and other exotic modes used here. PLEASE don't use FM in this area!

144.3 - 144.5 Satellite use. Please don't use FM here.

144.5 - 144.9 FM repeater inputs. 20 kHz channel spacing, from 144.51 to 144.89. The outputs are 600 kHz above the inputs (see 145.1 - 145.5)

144.9 - 145.0 No organization. Some use for uplinking to Space Shuttles, some digital, and some FM simplex.

145.0 - 145.1 Digital (packet), on 20 kHz channels: 145.01, .03, .05, .07, .09.

145.1 - 145.5 FM repeater outputs, on 20 kHz channels, from 145.11 to 145.49. Inputs are 600 kHz below outputs (see 144.5 - 144.9).

145.5 - 145.7 Digital (packet) FM.

145.7 - 146.0 Satellites. FM operation here can cause serious interference to the Amateur Satellite systems. *Please* don't operate here unless you're using the satellites.

146.0 - 146.4 FM repeater inputs, on 15 kHz channels, from 146.01 to 146.40. Outputs are 600 kHz above inputs.

146.4 - 146.6 FM simplex (a few repeater inputs in some areas) on 15 kHz channels, from 146.40 to 146.585. To avoid adjacent channel interference, we recommend using only the 30 kHz channels: 146.40, 43, 46, 49, 52 (the National Simplex Channel), 55 and 58.

146.6 - 147.4 FM repeater outputs, on 15 kHz channels, from 146.61 to 147.39. Inputs are generally 600 kHz below outputs for repeaters below 147.00, and 600 kHz above outputs for repeaters above 147.00. There are some exceptions -- see your repeater directory.

147.4 - 147.6 FM simplex, and digital, with a few repeater inputs (none in the Triangle area), on 15 kHz channels from 147.41 to 147.570. Again, using only 30 kHz channels will help prevent interference: 147.42, 45, 48 (the RARS Simplex channel), 51, 54 and 57. 147.54 and 147.57 are used for digital (packet) communication in the Triangle. 147.57 is the RARS DX Packet-Cluster.

147.6 - 148.0 FM repeater inputs, on 15 kHz channels, from 147.60 to 147.39. Outputs are 600 kHz below inputs.

You can learn much more about the band plan from the ARRL Repeater Directory, and the SERA Journal. The SERA (SouthEastern Repeater Association) is an organization of repeater owners and users in the southeastern states that coordinates repeater use. They publish a quarterly journal that's quite valuable to FM operators. Send $6 to SERA Membership, PO Box 215, Tobaccoville, NC 27050 for one year's membership.

EMERGENCIES. Helping communicate in emergencies is Amateur Radio's #1 reason for existence. Repeaters, especially with autopatch, are excellent tools for emergency communication, and the most frequent type of emergency called in is the traffic accident. Details on the 911-autopatch are included in this publication. And that's why we leave a pause between transmissions -- you never know when someone (you) will need the repeater in an emergency.

SKYWARN / ARES. We also use repeaters to help the National Weather Service in a operation called SKYWARN. When severe weather threatens the area, listen to the 146.88 repeater, and follow instructions from the net-control station. Details on SKYWARN are available at club meetings, and are regularly published in the Exciter. ARES is the Amateur Radio Emergency Service. During any kind of emergency, ARES operators will be using repeaters for local coordination and traffic-passing.

During these operations, the active repeater will probably be "closed" to regular conversations. But unless a major disaster has hit the area, there will be other repeaters available for regular activity. Ask the net control station for the status of the repeater.

PUBLIC SERVICE. Clubs across the country regularly help charitable organizations with communications during fund-raising events like bike-a-thons. We do this within the limits of our rules, which allow us to pass traffic that benefits and protects the safety of the participants. Repeaters and simplex are both used for public service events. Their activity isn't too compatible with other hams "rag-chewing" on the same channel, so during the event a repeater will again be "closed." If you need to make a call or a quick autopatch, call the net control station and most likely you can use the repeater for a minute with no problem.

1992-1993 RALEIGH AMATEUR RADIO SOCIETY MEMBERSHIP APPLICATION

PLEASE PRINT. Fill in / check applicable blocks.

Membership renewal requires submission of application with ALL CAPITALIZED FIELDS of sections 1 and 2 completed. List family members in space below.

1: NAME _____ Spouse's name _____

STREET _____ PHONE (H) _____ (W) _____

CITY _____ STATE _____ ZIP _____ - _____

2: CALL _____ LICENCE CLASS (-,N,T,+,G,A,E) _____ ARRL MEMBER (Y/N/L) ____

SIGNATURE _____ DATE _____

3: Having amateur related problems ? Please list needs below.

4: Do you wish to participate / assist in RARS activities - list below.

MEMBER CLASS	DUES	MEMBER CLASS	DUES
a. FULL	$18.00	b. FAMILY	$5.00 each additional membr
c. Under 16 or Over 60	$12.00	d. ASSOCIATE	$9.00 (Non-licenced)

Make check payable to: RARS, C/O Bernard Blackmon, 913 Northwoods Dr, Cary NC 27513

Application received: _____ Logged: _____ Amt: _____ Cash/Chk#_____

<---------- FOLD HERE ---------->

Write anything else you want to add here.

Cut this page out, complete form, fold and tape your check and mail to RARS.
Address is on other side. Use sticky tape, do not staple.

From:

Place 29c Stamp Here

To: RARS, C/O Bernard Blackmon,
913 Northwoods Drive,
Cary, NC 27513

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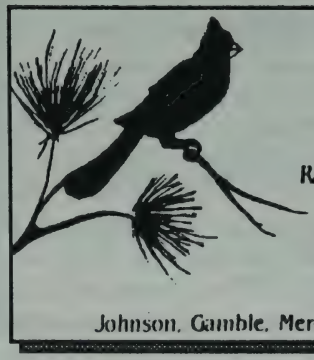

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GIVING DIRECTIONS. What's "Giving Directions" doing in a repeater operating guide? Just listen for a while, and you'll hear why. We give a lot of directions on repeaters, to locals in an unfamiliar part of town, and to traveling hams visiting the area. And, sad to say, too often we do it badly. One person will give adequate directions, and someone else just has to break in to give his favorite shortcut. Or somebody gives a two-minute long string of street names and landmarks, non-stop. The poor, lost ham who asked will then thank everyone politely, turn off the radio, and pull into a gas station to try again. We literally fall all over each other trying to be too helpful!

If someone has given directions that will get the traveler to her destination, let it be. Make a correction only if the directions are dead wrong. If it's your turn to give the directions, keep them short and simple. And it might be helpful to find out where the mobile station *is* before telling him where to go!

NETS. Repeaters are great places for nets, and there are lots of nets. A net is an organized on-the-air activity. We've mentioned a few already, like SKYWARN and ARES, but there can be many other types -- traffic nets, rag-chew nets, specialty topic nets, club information nets, and more. When a net is active on a repeater, the repeater is "closed" to other activity. The net-control is in charge of the frequency, and all communication should be directed to that station first.

TIMERS. Almost all repeaters have something called "timers." A timer is a clock that starts counting when you begin to transmit through the repeater. Typically, this clock is set to "time-out" after about three minutes. That means that if you transmit continuously through the repeater for more than three minutes, the repeater will go off the air (we call it "timing out"). Repeater timers usually reset to zero when you, the user, stop transmitting. If the repeater has a "beep," the timer is probably resets when you hear the beep. So you have to keep your transmissions under three minutes, and always wait for the beep, to avoid having your transmission dumped by the repeater timer.

The three-minute timers are one way to comply with the FCC rules for stations being operated by remote control (most repeaters are remotely controlled). They are not designed as punitive measures for gabby hams... but come to think of it, given the party-line nature of repeaters, and the potential for that emergency traffic, it's a good idea to keep your brilliant monologues a bit shorter anyway. If you must ramble on, orator that you are, don't forget to let the timer reset, and check if somebody else needs the repeater, after a minute or two.

CODED SQUELCH. There are two kinds of Coded Squelch commonly available to Amateurs: CTCSS (Continuously Tone Coded Squelch System), also known as Subaudible Tone and "PL" (Private-Line, a Motorola trade name), and DTMF (Dual-Tone Multi-Frequency), also known as Touch-Tone (an AT&T trade name). The purpose of coded squelch is to allow special signaling from a transmitter to a receiver, either to turn the receiver on, or to access special functions (like autopatch).

CTCSS keeps your receiver quiet on a busy channel until the station *you want* calls. It adds a "subaudible" tone to your audio, one of 37 very specific frequencies between 67 and 250.3 Hz. Yes, humans can hear these frequencies quite well, so they're "subaudible" because your receiver's audio circuit is supposed to filter them out. A receiver with CTCSS will remain silent to all traffic on a channel unless the transmitting station is sending the correct tone. Then the receiver sends the transmitted audio to it's speaker. In commercial radio service, this allows Jane's Taxi Company and Bob's Towing Service to use the same channel without having to listen to each other's traffic.

In Amateur Radio, some repeaters require users to send the correct CTCSS tone to use the repeater. This may mean the repeater is "closed," for use only by members, or it may simply be

used to avoid being keyed up by users of another repeater on the same frequency, just a little too close. You can use CTCSS yourself, if you have a decoder in your radio, to silently monitor a busy channel for stations calling just you. Arrange the tone to use in advance, and set your radio to CTCSS decode mode. Have your friend send your tone when she calls. You won't hear anyone else. But, *be sure to turn your decoder OFF* before you make a call, or when you answer one, or you might interfere with someone you aren't hearing. Note that many repeaters will not pass these low frequencies, so test the repeater you're planning to use before you count on it as a signal path. Some repeaters will pass the higher tones, but not the lower tones.

DTMF is used all over Amateur Radio, for autopatching and remote control. Many new radios are coming equipped with touch-tone *decoders* and a mode called "paging." Again, with a DTMF decoder you can silently monitor a busy channel. But this time, instead of listening for a subaudible tone, your radio is waiting for a touch-tone sequence. Once again, please turn off your decoder before making a call -- that "quiet" channel may have been busy for hours!

Well, now you have a lot of general knowledge about VHF-FM operating. Let's take a look at how this applies specifically to:

THE RARS REPEATERS

RARS, through it's VHF/UHF SIG, operates several repeaters, and has plans for several more. The current lineup includes:

144.53/145.13 W4ATC
Under Construction.

146.04/64 W4DW
The RARS Flagship Two-Meter Repeater.

223.04/224.64 WA4PEN
Raleigh's only 220 repeater.

449.5/444.5 WA4PEN
RARS' first 450 repeater, moving soon to 444.525.

449.875/444.875
on the air in a test mode, and will probably change frequency.

449.95/444.95 W4DW
our "Flagship" 440 repeater.

If you follow the suggestions in the past few pages, you'll do just fine on the RARS machines. Now, here are some technical details and operating instructions for the functions and features of the RARS repeaters:

146.04/146.64 W4DW THE RARS FLAGSHIP TWO-METER REPEATER

We usually call it just "Six-Four." Located at the north Raleigh city limits, near Six-forks Road and Strickland, the converted Aerotron repeater transmits with about 100 watts ERP (Effective Radiated Power), with the antenna at the top of a tower that puts it 500 feet above average terrain. This repeater is controlled by an Advanced Computer Concepts RC-96 controller, giving users a variety of functions. Here's what you can do on .64:

Autopatch/Autodial
Emergency "911" Autodial
Autopatch Options
Beep/Timer
Control Modes
S-Meter
Touch-Tone Pad Test
Touch-Tone Pass-Through
ID Demonstration/Bulletin Board

.64 AUTOPATCH -- YOUR BASIC PATCH. Earlier we gave some general guidelines for autopatch use. Here, we'll just remind you of the strict prohibition on using autopatch (or any Amateur Radio operation) for business. The RARS autopatch is "closed" -- meaning it can be activated only by RARS members. However, we encourage you to assist traveling hams by dialing patch calls

for them. You'll find hams in other cities equally helpful when you visit their town.

The ACCESS CODE is printed on your Exciter mailing label. Please don't give anyone the access code, and don't mention it on the air. If someone tells you they are a member and forgot the code or whatever, please ask them to call the treasurer. The club treasurer is the only individual authorized to disclose the access code (because only the treasurer knows who's paid-up their dues!).

Now, we'll assume you have a clear channel, and here's how to make your basic autopatch (some options will follow):

Sing out your Callsign! The control operators are particularly sensitive to autopatch operation -- they will be listening carefully, and they want to know who you are. If a control operator does not hear a clear ID before the patch is brought up, she will turn it off. Your ID can be as simple as this: "KN4AQ, Autopatch."

Then, dial the access code *and* the telephone number as one continuous string of touch-tone digits. This can be confusing for first-time operators. Here's an example: suppose the access code is *64, and the number you want to call is 555-0464. You would key your transmitter and push *645550464, and then drop your transmitter. If you are successful, the repeater will announce "AUTOPATCH" in it's very authoritative voice, and it will read back the phone number you entered (if it announces the *wrong* number, just press the KILL code).

Next, you will hear a series of beeps, indicating that the repeater is dialing your number (the digits you dialed were stored, and now they're being regenerated). The phone will ring, and you're on your way! Have a nice conversation. You might mention to your party that they are on the radio, so "keep it clean, and by the way, a few dozen people are probably listening to the conversation." Remember to keep your transmissions short.

If it turns out you called a bozo who doesn't care about our sensitivities and blurts out a nasty, immediately look around and see if the world as you know it has ended. If it hasn't, remind them of their gross transgression as politely as you can, and carry on. If they don't get the message and insist on being potty-mouth, kill the patch and cross them off your list of people you can call on the air. And by the way, when you transmit, their voice is cut off the air, so you have a quick censor-button right on your microphone.

You have three minutes to converse (note: the Emergency Autodial gives you 10 minutes). Most autopatches should be a lot quicker than that. If you do use up the time, the repeater will announce "30 SECONDS LEFT" to let you complete the call. (See OPTIONS, below).

When you are done, say "good-bye," and let your party hang up, just like on the phone. Then drop the autopatch by pressing your # key. Quickly drop your transmitter, and the repeater will announce "CALL COMPLETE." Then ID again "KN4AQ clear autopatch." That's it, you're done.

Readers who are very awake have noticed that they are instructed to *drop their transmitter quickly* after every touch-tone command to the repeater. This is no accident. The repeater requires that carrier drop within two seconds of the last touch-tone. Otherwise, it ignores the command.

If *something goes wrong* and you can't get a patch to go through, make sure you have a strong signal into the repeater. If you are weak and chopping in and out, the patch won't work. (If you hear a weak station trying to make a patch, do them a favor and tell them they aren't strong enough.) If you know your signal is good, you might check your tones using the TOUCH-TONE TEST (see below). Someone else might check the patch to make sure it's working, and finally, you might check your checkbook to see if you renewed your membership (the access code is changed after renewal time, and a few members get caught a little tardy. If you have renewed, the new access code will appear on your *Exciter* mailing label a week or two before the code is changed).

If something goes wrong *after* you've connected the patch and you lose control, don't panic. It happens -- an HT's batteries die, people step into open manholes, or mobiles drive out of range. The patch has an "activity timer" that looks for your signal. If no signal is heard for 45 seconds, the patch will disconnect itself. And of course there's that 3 minute total length timer. By the way, if your party puts you on hold or puts down the phone for a minute, you will have to key your transmitter once every 45 seconds to satisfy the activity timer. If you forget, the repeater will "warble" at you to remind you to key your transmitter.

If you are listening to someone else's autopatch, and it is very, very, very clear that they are having trouble, tell the party on the phone that the person they were talking to is having transmitter trouble and they will call back, and drop the patch. For all other autopatch trouble, let a control operator handle the situation.

AUTODIAL. Dialing the access code and a 7-digit number while driving can be difficult or even dangerous (many members ask someone stationary to dial a patch for them when they are in traffic). The repeater offers members a three or four digit "autodial" function as an "extra-cost option." The "extra-cost" is actually a one-time $7 contribution made to defray the cost of the controller. Send the treasurer $7 and tell him what number you want loaded into the autodial. In a few days, you will be given your autodial number -- something like "*44." To dial an autodial, *do not* dial the access code -- *just* dial the autodial number. The repeater will announce "AUTODIAL" and then you'll hear the dialing beeps. It will not read out the phone number. The rest of the call works like any other autopatch.

It is OK to give a non-member your autodial number and mention it on-the-air. They are welcome to call you via the RARS autopatch using your autodial.

EMERGENCY AUTODIAL. In an emergency, you can quickly reach Police assistance using the .64 Emergency Autodial. This feature is available to everyone, not just club members. When making an Emergency call, RARS suggests that you use the standard HAMWATCH procedure, which goes like this:

(IDENTIFY!!!) "KN4AQ Emergency Autodial." Then press the access code, which for the Raleigh Police is * 9 1 1 (the codes for other police agencies are listed below). Do *not* dial the access code -- the autopatch will *not* accept a 911 call using the access code. ONLY * 9 1 1 will work!

The repeater will announce the police agency you dialed, you'll hear the "dialing tones, the ring, and the dispatcher will answer.

Then use this general procedure: "This is HAMWATCH Operator KN4AQ. On Wade Avenue at Dixie Trail Road, there's a two-car accident blocking traffic. There are no injuries."

The dispatcher will acknowledge your call, and ask for more information if needed. If the location you have given is in another jurisdiction, they will forward your call, so it's a good idea not to blab endlessly on your first transmission. If you're not sure of the jurisdiction of your report, call Raleigh with * 9 1 1 and give them the location.

When you're finished, say good-bye, drop the patch (using the "#" code), and ID "KN4AQ clear autopatch."

This is tougher than it looks until you've had some practice. You may be very nervous on your first few emergency calls (and you will have some if only for a stranded motorist in busy Beltline traffic). So let's review the simple procedure. Say "This is HAMWATCH Operator..." You *don't* need to say anything about being an Amateur Radio Operator, or about being on an autopatch. To the Raleigh area dispatchers, the word "HAMWATCH" says all that for you! Next, tell the dispatcher the LOCATION, and briefly describe the PROBLEM. If it's an accident, they need to know if anyone was injured (if so, an ambulance will be dispatched).

Again, you will probably be nervous. If you've come across a real catastrophe, with people who are badly hurt, you may be *very* nervous. Don't rush to the autopatch. Make sure you know what the situation really is. Take a deep breath.

Rehearse what you will say to the dispatcher. Double-check your location. Then call. If you are too rattled, ask for help on the air. Keep your transmissions short. Try hard to not give the dispatcher a thirty-second monologue. Say it once, say it clear, and stand by for questions.

***911** dials the Raleigh Police dispatch center. Call them if you have any question about what jurisdiction you are in.

***910** is the Cary PD.

***912** is the Wake County Sheriff (they do *not* handle accident reports except in Holly Springs)

***913** is NC State University Public Safety. Their operator may not be familiar with HAM-WATCH.

***914** is the NC Highway Patrol. They handle accident reports in the unincorporated County.

***918** is the Wake Forest PD.

***919** is the Wendell PD.

Note: The Emergency Autodial timer is 10 min.

AUTOPATCH OPTIONS

Here's how to become an autopatch "power-user." The controller has some handy options to make autopatching a little easier and smoother.

OPTION #1 - NO PHONE # READBACK: You may not want the whole world to hear your girlfriend's phone number -- there are some loonies out there. To stop the repeater from announcing the phone number it's about to dial, add this step to the dialing procedure: ID, dial the access code and phone number as one string, drop your transmitter, listen to the repeater announce "autopatch," *and then key your transmitter briefly*. A half-second blip will do. The repeater will make the call without reading the number. But if security is really your goal, beware! While the repeater is disguising your tones on the *output*, anybody can hear them on the *input*, and we can't help you there.

OPTION #2 - REDIAL: This is really handy! If the number you called is busy, or if you forgot to ask if you should pick up a quart of milk, you can call the number back easily by simply using the REDIAL code **0 * *** (Zero-Star-Star). The repeater remembers the last number called for about 15 minutes.

OPTION #3 - TIMER EXTEND: Sometimes, three minutes just isn't long enough. We don't encourage rag-chewing by autopatch, but maybe you're lost and somebody's talking you into one of our twisting, dead-end-filled neighborhoods. You could use another minute on the patch. You got it! Just after the repeater announces "thirty seconds left," use the TIMER EXTEND CODE **0 * * 3** (Zero-Star-Star-3). You get another minute to talk. WARNING! The repeater will *not* give you another "thirty-second warning." You can, however, extend the timer as often as you need to. If you get cut off, once again look around to see if the world as you know it has ended. If not, use the REDIAL code to call back.

TIMER AND BEEPS

All RARS repeaters have 3-minute timers, because the FCC says we have to, and because they are a good idea. The timers are there in case our other methods of remote control fail and we can't get the repeater transmitter off the air. That doesn't happen much, so the real effect of a timer is to be a blab-limiter. You may find a RARS repeater timer set shorter than 3 minutes -- the goal then is to be a serious blab-limiter, usually during drive-time on the busy .64 repeater.

When someone talks too long and "times-out" the .64 repeater, it announces "Repeater Time-Out," and drop off the air. It will **stay** off the air until **all** signals are gone on the input (146.04) for about a second. Then it will come back on the air and announce "Repeater Time-Out Cancel." The other repeaters without voices just drop off the air, and come back on when their inputs are clear.

Most of the RARS repeaters "beep" in between transmissions. The beep reminds some of you to pause before responding. It also tells you when the timer has reset. If you don't wait to hear the

beep, then the timer keeps ticking from the last station's transmission. If she talked for two minutes, and you had the fastest hands in West-Raleigh, you have one minute left before the dreaded time-out.

Sometimes, either noise and junk, or signals from stations using distant repeaters, may hold up a RARS repeater. These signals are probably not strong enough to actually interfere with a local signal, but they can prevent the timer from resetting. It's frustrating!. That old timer is taking a licking, but it keeps on ticking. If a control operator is available, she may reset the timer or temporarily disable it. If not, then you can help by keeping your transmissions short, and leaving long pauses between transmissions. Give the timer every chance it can get to reset. If the repeater times-out despite your best effort, all you can do is wait.

TOUCH-TONE PAD TEST

Having trouble making autopatches? Maybe the repeater isn't decoding your touch-tones very well. On .64, you can test your tones. Be sure to ID, then send a string of touch-tone digits beginning with the digit 5. The 5 turns on the test, and the repeater will store the digits that follow. When you drop your carrier, the repeater will read back the digits you sent. For example, I might try this: "KN4AQ, touch-tone test," and then press 5 1 2 3 A * 0 # D. After I drop my carrier, the repeater will read back "One Two Three A S Zero P D." (The repeater says *S* for * and *P* for #.) "KN4AQ clear touch-tone test." (The control operators like to hear your ID when they notice touch-toning on the repeater. Touch-tone functions tend to be abused, and are quickly shut off when someone starts playing with them without identification.) You can test as little as one number, or the whole pad.

Touch-tone test is available only on the .64 repeater.

TOUCH-TONE PASS-THRU

Usually, the .64 repeater mutes when it hears touch-tones, replacing them with quiet beeps. You may want to have the repeater pass your tones un-muted, perhaps to open up someone else's touch-tone decoder. No problem. Begin your touch-tone string with #, and the rest of the notes you send in that transmission will pass through the repeater un-muted. The muting function will reset when you drop your carrier.

This function works during autopatches, too. Perhaps you want to control the function of an answering machine. Send the #, followed by the code you want to send. But wait a minute! Didn't we just get through telling you that the # *kills* the patch? Close, but no cigar! The # followed by a *carrier drop* kills the patch. The # followed by more digits becomes an "un-mute" command. The good old # is a multi-purpose character.

S-METER

How strong are you into the repeater? As this is written (June, 1992), all you can do is ask someone for a signal report. But when the proper circuitry is installed, the .64 repeater will be able to tell you. Push touch-tone 8, and the repeater will sample the last second of your transmission. When you drop your carrier, it will give you an "S-Meter" reading. Handy, but if you are a moving mobile or handheld with the usual flutter, you are only getting a "snapshot" of one moment of signal, *not* an average strength. It could be misleadingly high or low.

ID DEMONSTRATION/BULLETIN BOARD/TIME ANNOUNCEMENT

Again only on the .64 machine, where we spent the big bucks for the control system, you the "user" can make the repeater talk at will, by sending it touch-tones. You can make it run through it's bank of IDs, announce the version of software it's running (to see if RARS is spending money to keep up-to-date), broadcast two "bulletin-board" announcements, and give the time (does "breaker for a 10-36" remind you of anything?). Here's how to make it talk, with a little information on the "IDs" thrown in for good measure: dial the touch-tone codes 30 thru 39, and 3*, and, you guessed it, drop your carrier...

30 – Initial ID. This is the ID message the repeater sends if it hasn't been used in a while (about 10 minutes).

31 – Forced CW ID. If the hams using the repeater are real blabby, this morse code ID will run while they are talking. It runs at the 10-minute point if no other ID's have been able to run. It is set for a 20 WPM "W4DW."

32 – Anxious ID. This voice ID runs at the first opportunity (carrier drop) between the 9 and 10 minute points, if no earlier IDs have been able to run. It says "W4DW Repeater."

33/34/35 – Pending ID #1/#2/#3. The repeater will use the Pending ID's before the anxious or forced IDs if it can. They run if the repeater's carrier is allowed to drop anywhere between 6 and 9 minutes since the last ID (see NOTE, below). If the repeater carrier does not drop in that time, the anxious ID has a minute to try running, this time after the *input* carrier drops. When the repeater is busy for that minute too, the forced ID runs under the user's voice at the 10-minute point. The Pending IDs can be voice or CW, and may contain a brief message or time announcement, in addition to the "W4DW Repeater" ID. We can select any of the three Pending IDs exclusively, or run them in rotation.

36 – Special ID. The Special ID runs on the same schedule as the Pending IDs. It can be selected to run exclusively, or in rotation with the three Pending IDs. This ID will be used when the club has some special information to broadcast to members. When running in rotation with the Pending IDs, it will run every 24 minutes minimum (6 minutes X 4 IDs).

37/38 – Bulletin Board #1/#2. The Bulletin Boards run only when called by you, the user, via touch-tone command. They do not run automatically. They contain information on club functions or special events, net announcements, or whatever we feel like loading into them.

39 – The Time. Forgot your watch, just punch touch-tone 39, and Juliet will be happy to check her's for you. Don't forget to ID!

3* – Firmware Version. This is really a commercial for ACC, the company that made the controller. See if our repeater is as current as it should be.

In addition to these announcements and ID's, there are three brief "tail messages" available for quick announcements. The tail messages won't contain IDs, just a few words like "Radio Club Meeting Tonight." We can set them to run every half-hour or less. You can't bring them up with touch-tone.

THE OTHER REPEATERS

The .64 repeater definitely has the lion's share of functions as this guide is being written. Our other two meter, 220 and 440 repeaters are quite simple by comparison. Pretty much all they do is repeat (and most of them beep). None of them talk. That situation will change, and may already have if you're reading this sometime late in 1992 or early in 1993. Look for updates in the Exciter, and in a year or two we'll update this Welcome package. For now, here's where things stand:

145.13

The .64 repeater is busy, and getting busier. There are several other repeaters in the area, and most of us use them (and support them). But they are not RARS repeaters. Most of the other (and smaller) groups in the area have 2 two-meter repeaters, but RARS, with more than 500 members, has only had one. We have made a commitment to 220 and 440, and now we are making a commitment to our members, most of whom have only two-meter radios.

We found the two-meter band crowded indeed. There were no "open" slots for new repeaters, or so we were told. We surveyed the band, and found that to be pretty true. 145.13 will be a tight squeeze. There is a repeater on .13 in Ahoskie, 100 miles Northeast of Raleigh, and another on a mountain near Galax, VA. That one is 150 miles away, but has very wide coverage. Either will hear Raleigh area transmitters when the band is just a little bit open.

Our 145.13 repeater is a joint project with the NC State Amateur club, W4ATC, and will use their callsign. It will probably be located on a building at State, making it a fairly local machine with good central and South Raleigh coverage. It will eventually have autopatch. You'll get details through the Exciter.

220

The 220 repeater is on 223.04/224.64, and ID's in code as WA4PEN. It's pretty quiet up there. The repeater is located on the Dean Whitter building, on 6-Forks road about a mile north of the Beltline. This location is fairly low, making it a local machine. We plan to move it to the "Bayleaf" tower, where the 146.64 repeater is now located.

440

Big things are happening on 440 this year. Old vintage repeaters are being replaced by... well, less old, more recent vintage repeaters (we can't afford new repeaters!). Here's the plan...

444.50 is currently at the Dean Whitter site, right next to the 220 repeater. It is being replaced by one of the new-to-us radios, and will move to the Bayleaf site. It will also change frequency, to 444.525 (there are 444.50 repeaters in Lexington, NC, and Lynchburg, VA that both roll big signals into Raleigh when the band opens up even just a little). The repeater is a tribute to a RARS legend, Ed Alderman WA4PEN, and uses his callsign. A new RC-1000 control system will give us autopatch and some other control flexibility

444.875 is coordinated to RARS, and we've been testing one of the new radios on that channel. We probably won't end up using it regularly, though. Up in Maryland, there's a repeater that's "upside down" (their output on our input, and vice-versa), and when the band's open, the two repeaters "lock-up" and howl with feedback. We're looking for a clearer spot for the newest RARS repeater. The radio is a converted Harris mobile-telephone, which makes an excellent, very compact, and "frequency-agile" (synthesized) repeater. This particular Harris radio will become the 444.525 repeater.

444.950 was purchased from WA1WXL in 1990. It happened to be located at Bayleaf already, and is an old Motorola unit. It, and the frequency, will leave that location and be replaced by the 444.525 machine. It should re-surface sometime later on a tower in Apex, with all new guts. A Motorola Micor mobile radio is being converted to repeater service for this location.

THAT'S IT!
NOW, ENJOY THE REPEATERS!

OK, that's not quite it. If you've used ACC controlled repeaters elsewhere, you know there are functions we haven't covered here -- things like remote base operation and linking, paging, reverse autopatching and remote control functions. These capabilities exist in our controller as well, but we have not activated them on .64. Reverse patch is illegal on Amateur Radio, and the .64 repeater is too busy to handle extra traffic from linked radios. Paging tones are not very pleasant to listen to, so we avoid them as well. If any of these, or maybe new functions from upgraded firmware, are activated, you'll read about it in the Exciter. Now, enjoy the repeaters (and 147.48 Simplex)!

The
VHF/UHF SIG
Meets the 2nd Wednesday
of each month.
Come join us!

Raleigh Amateur Radio Society

146.64 REPEATER *CHEAT SHEET*

AUTOPATCH: Send access code and phone number as one string. See your Exciter mailing label for access code. Kill patch with **#**.

AUTODIAL: Do **not** use the access code. Dial * plus the autodial number.

EMERGENCY AUTODIAL: Do **not** use the access code. Dial *** 9 1 1** to reach Raleigh Police. They will forward your call to another jusisdiction if necessary.

REDIAL: To redial the last number, dial **0 * ***. Do **not** use the access code.

PATCH TIMER EXTEND: When the repeater announces "30 Seconds Left," press **0 * * 3**. You have one extra minute to complete your call, with no additional warning.

NO PHONE NUMBER READBACK: To prevent the repeater from reading back the phone number, wait until it announces "Autopatch," and click your mic button quickly. The repeater will proceed to dial.

TOUCH TONE PAD TEST: Dial **5**, plus any digits you want to test, as one string. The Repeater will resopnd by reading the numbers you sent. A ***** is read "Sierra," and a **#** is read "P."

TOUCH TONE PASS THROUGH: To let your touch-tones pass through the repeater without being muted, begin your touch-tone string with **#**. The rest of the tones will be heard through the repeater (or on the phone line during an autopatch).

S-METER: When this function has been installed, receive a signal check on the last second of your transmission by dialing **8**.

ID/BULLETIN BOARD:

30 - Initial ID
31 - Forced CW ID
32 - Anxious ID
33/34/35 - Pending ID 1/2/3
36 - Special ID
37/38 - Bulletin Board 1/2
39 - Time announcement
3* - Software Version announcement

Raleigh Amateur Radio Society

1992 Officers, Directors, Contact Persons

PRESIDENT	Walter Price - KM4BU	481-3856
VICE PRESIDENT	Rick Merkle - KA3PSK	870-8268
SECRETARY	Liz White - KO4CK	481-2874
TREASURER	Bernard Blackmon - KC4UPX	467-8719

Exciter Editor	Michael Gingell - KN4BS	847-4779
Publicity	Gary Pearce - KN4AQ	233-8306
FM Chairman	Chuk Gleason - KB4MDZ	467-5787
Training Director	Jim DuBreck - N4BYO	781-9473
W4DW Trustee	Lynn Pendleton - K4NYV	839-9449
Volunteer Examiners	Vince Yakamavich - AA4MY	847-8512
Hamfest	Ronnie Reams - WA4MJF	266-4434
Special Events	Walter VanGieson - AB4DQ	782-1424
2-Meter Net	Doug Sweet - KC4UPZ	481-1102
Public Service	Bill Bressler - KC4UQO	677-1891
Field Day (1992)	Rick Yost - N4VQT	848-7887
Field Day (1992)	Frank Scaraglino - KA2FWC	870-7260
Field Day (1993)	Michael & Mary Alice Ramsey KD4OKR & KD4OKQ	779-2648
SIG Coordinator	Ed Alderman - WA4PEN	876-0340
Homebrew SIG	Bob Keys - NA4G	847-0069
VHF/UHF SIG	Woody Winstead - KJ4SO	848-1844
Vintage Radio SIG	Tim Buehlmann - N4IQA	851-7738
HF SIG	Al Johnson - N4UOF	469-1758
ARRL Liason	Chuck Littlewood - K4HF	872-6555
BBS Sysop	Rick Merkle - KA3PSK	870-8268
Crystals	Liz White - KO4CK	481-2874

Minutes (cont, from Page 4)

Door prizes were won by WA4GIR - ARRL Antenna Book, KC4UQO - Antenna Compendiums Volume 1 & 2, and N4SDQ - a MFJ DXers World Clock.

KM4BU noted that the 146.82 Roaring Gap repeater is back on the air. Meeting adjourned at 10:05.

Liz White KO4CK, Secretary

May Board Meeting

The regular monthly board meeting of the Raleigh Amateur Radio Society was held at the YMCA on Hillsborough St. The meeting was called to order by KM4BU at 7:05. Members present at that time: KO4CK, WA4MJF, KB4MDZ, KA3PSK, KC4UQO. Late: KN4BS, N4BYO, KC4UPX. Absent: KKN4AQ, K4HF, WA4PEN, N4VQT, AA4MY.

Motion by WA4MJF and second by KA3PSK to approve the minutes of the April board meeting. None opposed.

Discussion about payment not being made to church for last class. Rob Orander stated that the church had not yet been paid. Payment to be made for each of the 25 students plus 2 projector bulbs. Check to be made immediately to pay those amounts.

Point made that the Treasurer make checks available to the President if he must be out of town for an extended period of time.

Discussion of field day expenses. Cost of using generators caused an overage on the field day budget. This will be the last year of paying these costs. It was noted that the costs for field day will not include the generator expense. The food at field day will be provided for the operators only. If others wish to come out to observe and want to eat, they are to bring food to share.

NO0T spoke on the ARRL proposed Spectrum Usage Committee. Among the members, only one person will represent packet on the committee. This appears not to represent packet cluster to the fullest as there are differences between packet and packet cluster. N4BYO moved that NO0T draft a letter and put it out on the bulletin board to board members. The letter drafted by NO0T supporting packet cluster representation after approval by the board to be sent to Mr. Kanode our Division Director with a copy to the league president. Second by KA3PSK. Motion carried. Motion by N4BYO with second by KA3PSK to amend the motion to include sending a copy of the letter to SERA. Carried.

KA3PSK said that KD4BFF was in the hospital and inquired whether a card had been sent. It had.

It was noted that the video editor for CQ magazine was in Raleigh collecting information about various club members. They will be making educational video tapes on amateur radio and Raleigh is a site under consideration for use in these tapes.

Budget item changes: Motion by WA4MJF to consider for budgeting purposes 250 members @ $18/member and 75 at $9. No second. Motion by KC4UPX with second by WA4MJF to eliminate the contingency line item and add that money to Board Approved Non-Specified Additions to the Budget. Motion carried. Motion by KA3PSK with second by WA4MJF to increase the picnic line item. Motion carried. Motion by N4BYO with second by WA4MJF to increase the field day line item. Motion carried.

N4BYO stated the cost for tax exempt status. Motion by N4BYO with second by WA4MJF to designate an amount to be placed in trust with attorney Sam Johnson to offset the cost for tax exempt status. Passed.

N4BYO moved to place an amount in a line item for Special Events. Second by WA4MJF. Passed.

Motion by WA4MJF with second by KB4MDZ to approve an amount for the FM Committee. Passed unanimously.

Motion by WA4MJF to put RARS SIG budget at a specific amount. No second. Motion by N4BYO to set the SIG budget at a lesser amount, including a portion of which would be an addition for postage for the Scanner SIG. Second by KA3PSK. Motion carried.

KA3PSK moved to accept the budget as amended to be presented to the membership at the June meeting. Second by N4BYO. Motion carried.

Note that KB4MDZ will be prompting people to give their call sign and "emergency" when there is a cause. At which time other stations must clear until the emergency has been handled. Meeting adjourned at 10:35.

Liz White, KO4CK

VE Report
June 3 Session Results

Twenty three applicants and 10 examiners crammed into the YMCA's annex. Eighteen of the applicants were seen to exit with smiling faces. The results (in no particular order):

Al Johnson, N4UOF, General
Richard Saccoccia, KB4EYV, General
Danny Musten, Tech
Harry Kuhman, Tech
Jimmy Johnson, Tech
William Perkins, KD4OIX, General
John Naylor, WB4OMN, Advanced
Gerald Fry, Tech
Michael Malpass, N4XXG, EXTRA
Michael Rundle, Tech
Marcus Smith, KD4JLC, General
Gregory May, EXTRA
Douglas Spriggs, Tech
James Butler, Tech
Theresa Bradburn, Tech
Jerry Shannon, Tech+
Melissa Stafford, KC4HAF, Tech+

Several others pick up partial credit, to earn the license another day, including Chris Hux, N4PNO picking up his EXTRA written! All in all, the up-grade rate is 78.5%, and the Pass per Element was 80.4% Pretty darn good, considering the national rate is still in the 68% area...

Also deserving of extra note were the two visually handicapped hams, Melissa KC4HAF and Chris, N4PNO who were successful in spite of the additional challenge.

And speaking of extra notes, Greg May upgraded to extra. So what you ask? Well, prior to the April Raleigh hamfest, Greg never held a license! In fact, he still hasn't received his FIRST call sign. He went no license to Gen. at our hamfest (with 20 wpm!), picked up the Advanced in Durham in May, and well, like they say, the rest is history!

Once again, a tip o' the VE RARS cap to the VE's working the June session: Lynn, KO4QH; Terry, AB4VJ; Rob, AB4FY; Joe, WA4GIR; Lee, KN4AK; Andy, N4SSX; Alan, AB4OZ; Chuck, K4HF; and Glenn, WA4LHE. Without these fine folks volunteering their time and effort, none of the success stories listed above would have been possible that night.

In the days before this exam, I received more than one phone call asking about the status of the exam. Evidently, the word on the repeater was that the exams had been cancelled. That was news to me! Would the person responsible for this rumor please step forward and identify themselves?? If someone is going to take charge of our team's scheduling, at least let me know who you are!

Unless you see it in print here in the EXCITER, or officially announced on the 04/64 net by a club officer, we will hold with our schedule of "even numbered months." Thus, we will be testing again at the club meeting in the months of August, October, and December. Additionally, we are scheduled for the Cary Swap Fest, (Sat. July 18th), and the JARS Fest in Benson (which I think is late Oct.)

For the RARS VEs working the Cary Swapfest Exams, the exams start promptly at 11 AM, upstairs in the Cary Convention Center. Even if you told me before you planned on working the event, please call and let me know again. My memory is going... (now was that the first thing to go?? I forget...)

News News News

A new 610 form. Yup, the FCC is breaking history — we now have 3 different versions of the 610 being accepted. One bearing the expiration date of 1989, (although technically expired, they're still accepting it), the other 12/92, and the newest, 2/95! The new one now has the Physicians Certification of Disability printed on the back. No longer are the extra forms filled out by the doctor required. Simply have the doctor sign the back of the 610. Added to the verbiage of the waiver request is a minimum duration of the handicap, which must last for 365 days. Sorry guys, you can no longer

qualify if your hand is in a temporary cast! (Unless, of course, the cast will last for 1 year!) Also changed is the date of birth section which now uses hyphens (-) to separate the day-month-year, rather than the slash (/). Aren't you glad there are high-paid bureaucrats in Washington that are taking care of us like that?!? The last change is a block requiring the applicant's initials to authorize a change in call sign.

FCC Flap de Jour

It's been many years since the FCC did away with honoring specific requests for call signs. At one time, clubs (like RARS) and individuals could request a specific call sign — sometimes in memory of a distinguished member or relative — sometimes for your initials. Claiming the workload was just too much for their poor over-burdened staff, the FCC abandoned this policy many years ago. That was the rule for ALL hams. But apparently the rule has "selective application". It still holds true for peons like you and me, BUT, if you happened to represent the ham club of the government sponsored Voice of America (VOA) in Washington DC, AND you happened to hob-nob with some influential FCC bureaucrats, well, apparently, anything is possible. The VOA club was recently issued K3VOA. Coincidence? Hardly. As usual, those responsible are frantically playing "cover your butt" and hoping we peasants will never know, or forget it ever happened. Sorry guys, the cat is out of the bag. Perhaps soon we ALL will enjoy the privilege bestowed on the VOA. But with the prevailing attitude of Washington bureaucrats, don't hold your breath! Cest la vie!

(And in closing this months VE Report, allow me one "personal" message: EXTRA SPECIAL congrats to N4UOF, who I knew, someday, would master that 13 wpm code! Way to go Alf! Now ... if we can just get Cyndi Wood over that same hurdle....!] Till next month,

73 to all DE AA4MY

JUNE VHF/UHF SIG REPORT

The June meeting was held on the 10th at the home of Ginger and Rick Merkle. A record 37 hams were present: KJ4SO, AB4OZ, KO4QH, KC4GFR, N4PNO, N4IOA, KD4KWQ, KB4RZ, KB4MDZ, NA4G, KD4IHW, KD4BFU, KD4BFJ, KD4JMN, KA2FWC, N4ZBB, WA4PEN, KD4ACW, WA4BPJ, WA4MJF, WD4RDT, KD4OLZ, KB4EXL, KD4OKP, KN4AQ, NO0T, KA3PSK, KC4OCB, N4VQT, AB4FY, N4BYO, K4SAN, KM4BU, KD4OKR, and WA4LHE.

Woody, KJ4SO, called the meeting to order and Glenn, WA4LHE, gave the treasurers report.

Brian, KD4BFJ, found a 6-meter beam for the SIG. It was moved, seconded and voted in favor that this be purchased for $20.

Ken, N4ZBB, informed the SIG of local involvement in the SAREX program. He is presently attempting to get local schools on the schedule for contacting the shuttle STS-47. He also hopes to use links to a number of schools in order to get as much participation as possible. The SIG membership agreed to support this worthwhile project. The SIG will ask the RARS board for support at the next board meeting.

Dave, K4SAN, chairman of the SIG VHF/UHF QSO PARTY began his presentation of preparations for the upcoming contest.

The meeting ended and we had some of the most delicious desserts that could be found anywhere.

At this writing, the contest has already been held and was very successful. Total points have not been figured yet but should be two or three times last years score. Also, a great deal of FM participation was enjoyed by many. Contacts were made with everything from HT's and mobiles to super SSB stations. Thanks to everyone for your support. Another plus this year was the "rovers". These hardy individuals drove many hours to help assure that some of the rare grid squares didn't escape our logs sheets. What-a-go!!!

Glenn Clary, SIG secretary/treasurer

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